

REMARKS

Applicants wish to thank the Examiner for the personal interview conducted on 6/22/2005, where agreement was not reached with respect to patentable claims over the prior art of record. The interview was conducted in person and attended by Examiners Marjorie A. Moran and Marina I. Miller, and Applicants' representative William R. McCarthy III. The subject matter of the interview included a general discussion of the Examiners point of view regarding utility under 35 U.S.C. §101 and bioinformatic inventions, Applicants indication of support for claims in priority documents, as well as discussion of proposed claim amendments which were faxed to the Examiner prior to the interview. In particular, the limitations of generating a custom probe array design of independent claims 1, 5, 19, 33, and 84 were discussed with respect to the rejections applied under 35 U.S.C. §102 (a) and (b) and 35 U.S.C. §103(a) and in particular the disclosure of Anderson et al. (WO 01/80155). Applicants would like to state that the interview was found to be very helpful in advancing the prosecution of the present application.

Upon entry of this amendment claims 1-2, 4-17, 19-31, 33-35, and 84 are pending, and of these claims 1, 5, 19, 33, and 84 are independent. Applicants have cancelled claims 3, 18, 32, and 36-83. Applicants have also amended paragraphs 0074, 0076, and 0142 to remove the embedded hyperlinks.

Applicants are respectfully re-submitting the missing reference from the information disclosure statement filed 12/17/2003 in another information disclosure statement filed herewith. Applicants respectfully point out that the Examiner crossed out the WO 02/061646 A1 reference on form SB/08a (reference No. 7) to indicate that the

reference was not considered, but would like to note that the Examiner cited (See Notice of References Cited, reference N) and furnished a copy of the WO 02/061646 A1 reference with the presently applied office action, and further applied the WO 02/061646 A1 reference (using US 2004/067488 as an English translation) in the rejections under 35 U.S.C. §102(a), and 35 U.S.C. §103(a). Therefore, Applicants respectfully assert that the WO 02/061646 A1 was considered by the Examiner.

Applicants have amended claims 1, 5, 19, 33, and 84 to include the limitations of “receiving an indication from the user to share a custom probe array design with one or more additional users”, the support for which may be found in paragraph 0143 of the present application.

Applicants have also amended claim 1 in accordance with the election of “nucleic acids” with respect to species A; claims 10, and 24 in accordance with the election of “uniqueness” with respect to species B; claims 13, and 27 in accordance with the election of “one or more indicators of geographic dispersion of probe sets on the probe array” with respect to species C; and claims 9, and 23 in accordance with the election of “a gene” with respect to species D.

Applicants assert that no new matter is presented by these amendments and respectfully request entry of the same.

Reply to Claim Rejections – 35 U.S.C. §101

Claims 1, 3-35, and 84 are rejected under 35 U.S.C. §101.

Applicants respectfully assert that claims 1, 5, 19, 33, and 84 as amended each comply with the requirements of 35 U.S.C. §101 as discussed in the personal interview of

6/22/2005. In particular, each of the aforementioned claims as amended provides a concrete, tangible and useful result that has practical application. For example, the claims are concrete because they include a user defined selection that clearly sets forth the set of data acted upon from the world of possibilities, and also produces a clear result that is specific, substantial, and credible, such as providing one or more probe arrays to a user based on a custom probe array design. Further, the result produced is tangible because the one or more probe arrays provided to the user are physical embodiments that the user may employ. Additionally, those of ordinary skill in the related art will appreciate the usefulness and practical applications of providing a user with one or more probe arrays based on a custom design.

Therefore, Applicants respectfully assert that each of claims 1, 5, 19, 33, and 84 are directed to statutory subject matter and comply with 35 U.S.C. §101 and are thus patentable. Additionally, Applicants assert that each of claims 2, 4, 6-17, 20-31, and 34-35 each depend from either claims 1, 5, 19, or 33 and are thus also patentable for the same reasons.

Reply to Claim Rejections – 35 U.S.C. §102

Claims 1-34, and 84 are rejected under 35 U.S.C. §102(b) over Anderson et al. (WO 01/80155). Anderson et al. is generally directed to the automated designing of custom probe arrays.

Applicants respectfully assert that the disclosure of Anderson et al. does not describe all of the limitations of independent claims 1, 5, 19, 33, and 84 as amended. In particular, Applicants assert that Anderson et al. does not describe the limitations of

receiving an indication from a user to share a custom probe array design with one or more additional users. In fact there is no description in Anderson et al. of sharing a probe array design, instead Anderson et al. describes filling available array spots in a probe array design with duplicate probes if more positions than needed are available (Page 21, line 2 *et seq.*) that is different than the claimed sharing of available spots in the design with other users. Further, since there is no description of sharing a custom probe array design in Anderson et al., there is also no description of receiving an indication from a user to share the custom probe array design with other users.

Therefore, Applicants respectfully assert that Anderson et al. does not describe all of the limitations of claims 1, 5, 19, 33, and 84 as amended, and thus each of the aforementioned claims is patentable. Also, Applicants respectfully assert that each of claims 2, 4, 6-17, 20-31, and 34-35 each depend from either claims 1, 5, 19, or 33 and are thus also patentable for the same reasons.

Claims 1, 3, 5-8, 11-13, 15-22, 25-27, 29-35, and 84 are rejected under 35 U.S.C. §102(a) over Tekagawa et al.(US 2004/0067488 as a translation of WO 02/61646). Tekagawa et al. generally describes a DNA chip order placing system for receiving an order from a customer and stores an inventory, a production plan, a method for calculating price, and a method for scheduling production.

Applicants respectfully assert that the disclosure of Tekagawa et al. does not teach all of the limitations of independent claims 1, 5, 19, 33, and 84 as amended. Specifically, Applicants assert that Tekagawa et al. does not describe the limitations of receiving an indication from a user to share a custom probe array design with one or more additional

users. For example, Tekagawa et al. describes designing steps that comprises a method for determining optimal probe arrangement in paragraph [0102] that includes sorting probes using a T_m (i.e. melting point) value associated with each probe and assigning the probe to coordinate positions on the array in ascending or descending order. There is no description with respect to the determination of the arrangement of probes described by Tekagawa et al. of sharing available locations in a probe array design with other users, nor is there description of receiving an indication from a user to share the custom probe array design with other users.

Therefore, Applicants respectfully assert that Tekagawa et al. does not describe all of the limitations of claims 1, 5, 19, 33, and 84 as amended, and thus each of the aforementioned claims is patentable. Additionally, Applicants respectfully assert that each of claims 6-8, 11-13, 15-17, 20-22, 25-27, 29-31, and 34-35 each depend from either claims 1, 5, 19, or 33 and are thus also patentable for the same reasons.

Reply to Claim Rejections – 35 U.S.C. §103

Claims 2, 4, 14, and 28 are rejected under 35 U.S.C. §103(a) over Tekagawa et al. (US 2004/0067488 as a translation of WO 02/61646) in view of Cantor et al. (US 6,007,987), and claims 8-10, and 22-24 are rejected under 35 U.S.C. §103(a) over Tekagawa et al. (US 2004/0067488 as a translation of WO 02/61646) in view of Garner (US 2003/0033290).

As described above with respect to the rejection under 35 U.S.C. §102(a), Applicants respectfully assert that that Tekagawa et al. does not describe the limitations of receiving an indication from a user to share a custom probe array design with one or

more additional users. Applicants also assert that neither Cantor et al. nor Garner et al. describes such limitations. Therefore none of the aforementioned references describes each of the claimed limitations either alone or in combination and thus each of claims 2, 4, 8-10, 14, 22-24, and 28 are thus patentable.

CONCLUSION

In conclusion, Applicants have amended each of claims 1, 5, 19, 33, and 84 to include limitations that none of the references applied under 35 U.S.C. §102 or §103 disclose and thus respectfully assert that each are patentable. Further, since claims 2, 4, 6-17, 20-31, and 34-35 each depends from one of claims 1, 5, 19, or 33 in their chain of dependency each are thus patentable for the same reasons.

For these reasons, Applicants believe all pending claims are now in condition for allowance. If the Examiner has any questions pertaining to this application or feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (781) 280-1522.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account 01-0431.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Application No.: 10/065,868

Attachments

Information Disclosure Statement
Form SB/08a
1 Reference

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